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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,982	10/19/2000	Werner Dirschedl	4100 117P	5798

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EXAMINER

SHEW, JOHN

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/622,982

Applicant(s)

DIRSCHEDL ET AL.

Examiner

John L Shew

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Examiner has considered the applicant's May 23, 2004 response to the Examiner's Office Action of November 19, 2003. In review of the applicant's arguments, the following new rejections are being made.

Specification

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun in view of Bishop et al.

Claim 1, Braun teaches a method of transmitting data over a bi-directional radio channel (FIG. 1, column 1 lines 1-4, column 3 lines 3-5) referenced by half duplex radio system transmitting and receiving, the method comprising dividing digital data that is to be transmitted into individual data packets (column 3 lines 59-63) referenced by packet

mode transmission of X.21 data, dividing at a transmitting and receiving station of the bi-directional radio channel the data according to a second data transmission protocol into individual data packets (FIG. 8, column 9 lines 60-67) referenced by transmission of X.21 HDLC protocol as the second data transmission protocol to the Half Duplex Transceiver 80 for individual packetized transmission over RF, transmitting the individual data packets alternately forward and in reverse between transmitting and receiving stations over the radio channel by the simplex method (FIG. 8, column 9 lines 31-38) referenced by the half duplex radio transceiver 80 which transmits packets alternately forward and in reverse by the simplex method. Braun does not teach a first data transmission protocol with identifiers of a number, a length, a priority or a type. Bishop teaches a first data transmission protocol (column 1 lines 1-4) referenced by inter-processor communication protocol, wherein a number, a length, a priority and/or a type of the individual data packets generated is determined as a data packet identifier (FIG. 4, column 9 lines 6-9) referenced by number of entries indicator 314 for number (FIG. 4) referenced by Buffer Size 332 for length (column 1 lines 53-61) referenced by priority for regular-type or quick-type messages are parameters of the individual packets generated, and the length of the data packets generated by the second data transmission protocol is determined in at least one of the transmitting and receiving stations as a function of these data packet identifiers for optimum utilization of radio channel capacity (column 1 lines 49-68, column 2 lines 9-16, column 16 lines 38-40) referenced by optimization for minimum latency through determination of priority type messages where quick messages are given priority thereby impacting packet length.

Claim 2, Bishop teaches the data packet identifier is determined at a sending and receiving station and the data packet length is determined as a function thereof at the same station (FIG. 15, column 16, lines 54-57) referenced by PROCESSOR 101 access of Quick Message REG918, SEND FIFO 921 and RCV FIFO 923 .

Claim 3, Bishop teaches the data packet identifier determined at a transmitting and receiving station is transmitted to the remote station (FIG. 14, column 17 lines 35-43) referenced by the structure of the quick message packet transmitted inclusive of a packet type code. Incorporation of Bishop's higher layer protocol to Braun's X.21/HDLC lower layer protocol inherently influence the length of the data packets in the second data transmission protocol since the second lower layer X.21/HDLC protocol must encapsulate the higher layer protocol for transmission over the RF link.

Claim 4, Bishop teaches wherein data packet identifiers determined at both transmitting and receiving stations are transmitted to the respective remote station (FIG. 14, column 17 lines 35-43) referenced by the structure of the quick message packet transmitted inclusive of a packet type code. Incorporation of Bishop's higher layer protocol to Braun's X.21/HDLC lower layer protocol inherently sets the length of the data packets in the second data transmission protocol since the second lower layer X.21/HDLC protocol must encapsulate the higher layer protocol for transmission over the RF link.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the higher layer inter-processor protocol and apparatus of Bishop to the lower layer half duplex radio communication system of Braun for the purpose of optimizing latency of data transfer over radio frequency waves.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seazholtz et al. in view of Bishop et al.

Claim 5, Seazholtz teaches a transmission system (FIGURE 1) referenced by Mobile End System 2 transmitting to Mobile Data Base Station 1, comprising a first transmitting/receiving station for transmitting and receiving data to and from a second transmitting/receiving station (FIGURE 1, FIGURE 4, column 20 lines 37-40) referenced by the Radio Frequency unit 22 having a transceiver which is used to transmit between the Mobile End System 2 and the Mobile Data Base Station 1, via a shortwave radio channel having a fixed data rate (FIGURE 4, column 20 lines 30-37) referenced by communication device 4 used for high output power radio devices including short wave radio communications which inherently must work for at least a single fixed data rate, and a data packets are formed based on a second data protocol (column 19 lines 63-67, column 20 line 1) referenced by Cellular Digital Packet Data protocol supported by the short wave operation.

Seazholtz does not teach receiving a first data protocol with packet identifiers for transmission over the CDPD protocol of the radio communications system.

Bishop teaches a first data protocol (column 1 lines 1-4) referenced by the inter-processor communication protocol, wherein data packet identifiers of the inputted data packets which are based on the first data protocol identifying a number, a length, a priority or a type of the data packets (FIG. 4, column 9 lines 6-9) referenced by number of entries indicator 314 for number (FIG. 4) referenced by Buffer Size 332 for length (column 1 lines 53-61) referenced by priority for regular-type or quick-type messages are parameters of the individual packets generated, second data packets are formed based on a second data protocol and on the basis of packet identifiers (FIG. 4, FIG. 13) referenced by the second protocol packet structure, wherein the first and second transmitting/receiving stations adjust a frequency of switching between transmitting and receiving the second data packets (FIG. 2, FIG. 4, column 37-46) referenced by the simplex mode of port data transmission along with the OQ TOGGLE 383 and IQ TOGGLE 384 control fields, on the basis of data packet identifiers of the inputted data packets (FIG 13) referenced by TOGGLE 331 field of packet structure.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the higher layer inter-processor protocol and apparatus of Bishop to the lower layer CDPD protocol short wave radio communication system of Seaholtz for the purpose of optimizing latency of data transfer over short wave radio frequency waves .

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seazholtz and Bishop as applied to claim 5 above, and further in view of Rossmann.

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Seazholtz and Bishop teach a short wave radio communications system with upper layer packet identifiers to optimize latency transmission. Seazholtz and Bishop do not teach a first data protocol of TCP/IP.

Rossmann teaches a first data protocol is a TCP/IP protocol (FIG. 5, column 19 lines 42-54, column 21 14-17) referenced by the use of TCP protocol over a CDPD network. TCP is a middle layer 4 protocol whereas CDPD is a layer 2 protocol. The upper layer protocol of Bishop is a layer protocol above TCP.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the higher layer inter-processor protocol and apparatus of Bishop to the middle layer TCP protocol of Rossmann with the CDPD protocol short wave radio communication system of Seaholtz for the purpose of providing connectivity to the Internet which uses TCP/IP protocol.

Citation of Prior Art

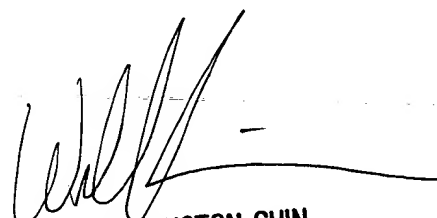
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent 6064678, Sindhushayana discloses an optimal packet length variable rate communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L Shew whose telephone number is 703-305-8708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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